

# Work Order ID 68001

Tuesday, April 05, 2011 10:48:45 AM

Page 1

**PRELIMINARY  
ISSUE**

Accept

Item ID: D4380-27

Revision ID: PRELIM

Item Name: Vent, Center

Start Date: 4/5/2011 Start Qty: 1.00

Required Date: 4/5/2011 Req'd Qty: 1.00

Reference:

Cust Item ID:

Customer:

Setup Start

Stop

Run Start

Stop

Approvals: Process Plan: ME

Date: 11-4-05

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

| Draw Nbr | Revision Nbr   |
|----------|----------------|
| D4380    | PA6 <u>PA7</u> |

100 0.00



HandThermo

Memo

0.00

Hand Finishing Thermoforming

1-Cut Sheet to required Blank size

105 0.00



HandThermo

Dry Material

Memo

0.00

Hand Finishing Thermoforming

Dry Sheet as per QS1022 Kydex

Temp: 150°F

Time IN: 6:00 AM 11/04/04

Time OUT: 7:00 am 11/04/05

BB  
11/04/05

BB  
11/04/05

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 68001

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Item ID: D4380-27

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Setup Start

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Start Date: 4/5/2011 Start Qty: 1.00

Required Date: 4/5/2011 Req'd Qty: 1.00

Cust Item ID:

Customer:

Reference:

Approvals: Process Plan: Date: Tooling: Date:

QC: Date: SPC (Y/N): Date:

Run Start

Stop

| Sequence ID/<br>Work Center ID | Operation<br>Description | Set Up/<br>Run Hours | Tool ID | Tool # | Plan<br>Code | Accept<br>Qty | Reject<br>Qty | Reject<br>Number | Insp.<br>Stamp |
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|
|--------------------------------|--------------------------|----------------------|---------|--------|--------------|---------------|---------------|------------------|----------------|

110



Thermoform

Thermoforming Machine

Memo

1-Machine Set-Up  
2-Pre-heat Tool to required temp.  
3-Thermoform as per Dwg and Folio #FTA123 using tool DT9748

Dwg Rev: PA7

Folio Rev: 4

0.00

0.00

120



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

Visually inspect part for proper formation and texture

0.00

130



QC

Quality Control

QC8- Inspect parts - second check

0.00

Memo

0.00

11/04/05

11/04/05

11/04/05

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 68001

Tuesday, April 05, 2011 10:48:45 AM



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Item ID: D4380-27

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Item Name: Vent, Center

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Cust Item ID:

Required Date: 4/5/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

140



HandThermo

Memo

0.00

Hand Finishing Thermoforming

1-Trim to finished dimensions as per Dwg

1

DL  
11/04/05

150



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

0.00

Memo

Complete FAI document

1

DL  
11/04/05

160



QC

Quality Control

QC5- Inspect part completeness to step on W/O

0.00

Memo

0.00

- inspect to PA 2  
Dwg only  
Subtotal @

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

# Work Order ID 68001

Tuesday, April 05, 2011 10:48:45 AM



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Item ID: D4380-27

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Setup Start



Revision ID: PRELIM

Item Name: Vent, Center

Stop



Start Date: 4/5/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 4/5/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

170

Identify as per dwg & Stock Location: RECALL

0.00



Packaging

Memo

0.00

Packaging

11/4/11 (1)

180

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

~~11/4/11~~

7402370

POSITIVE RECALL

EFFECTIVE 11/4/11

AUTH LMF

RELEASED 11/4/11

DATE 11/4/11

LMF

11-04-06

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries



# Picklist Print

Tuesday, April 05, 2011 10:48:42 AM

Page 1

Work Order ID: 68001



Parent Item: D4380-27



Parent Item Name: Vent, Center

Start Date: 4/5/2011

Required Date: 4/5/2011

Start Qty: 1.00

Required Qty: 1.00

Comments: Rev. A New Issue 11/04/04 DL verified by:EC

| Component Item ID/<br>Item Name | Replacement<br>Item ID | Mfg/<br>Purch | Bin<br>Item | Primary<br>Location | Last<br>Location | Route<br>Seq ID | Unit of<br>Measure | Qty on<br>Hand | Qty per Kit | Total<br>Qty | Qty<br>Issued | Date<br>Issued | Status |
|---------------------------------|------------------------|---------------|-------------|---------------------|------------------|-----------------|--------------------|----------------|-------------|--------------|---------------|----------------|--------|
| MKYD6185S.080-P3-<br>62015      |                        | Purchased     | No          |                     |                  | 100             | sf                 | 787.2912       | 6.9375      | 6.9375       |               |                |        |



6185 KYDEX .080"



Location

Loc Qty

Loc Code

therm

787.2912

116576

787.2912

Whe  
11/04/06

6.9375 sq ft

| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                             |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng        | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

|  |                             |
|--|-----------------------------|
| <b>DART AEROSPACE LTD</b>                    | <b>Work Order:</b> 100001   |
| <b>Description:</b>                          | <b>Part Number:</b> 4380-27 |
| <b>Inspection Dwg:</b> D4380 <b>Rev:</b> PA7 | <b>Page 1 of 1</b>          |

**FIRST ARTICLE INSPECTION CHECKLIST**  
**THERMOFORMING SECTION**

| Description   | Accept | Reject | Method of Inspection | Comments |
|---|--------|--------|----------------------|----------|
| Inside Radii less than <u>1/4</u> "                             | ✓      |        |                      |          |
| Shape Definition  | ✓      |        |                      |          |
| Texture Retention   | ✓      |        |                      |          |
| Material imperfections such as bumps, cracks, voids, scratching | ✓      |        |                      |          |
|   |        |        |                      |          |
|   |        |        |                      |          |
|   |        |        |                      |          |

**Measured by:** Wh

**Date:** 11/04/05

**TRIMMING SECTION**

| Drawing Dimension | Tolerance         | Actual Dimension | Accept | Reject | Method of Inspection | Comments |
|-------------------|-------------------|------------------|--------|--------|----------------------|----------|
| 17.0"             | <del>±.100"</del> | 16.9"            | ✓      |        | Tape DL-01           |          |
| 5.0"              | ±.100"            | 5.0"             | ✓      |        | Tape DL-01           |          |
| 5.0"              | ±.100"            | 4.9"             | ✓      |        | Tape DL-01           |          |
| 5.0"              | ±.100"            | 4.9"             | ✓      |        | Tape DL-01           |          |
| 3.4"              | ±.100"            | 3.5"             | ✓      |        | Tape DL-01           |          |
| 2.1"              | ±.100"            | 2.135"           | ✓      |        | Tape DL-01           |          |
| 2.0"              | ±.100"            | 6.9"             | ✓      |        | Tape DL-01           |          |
| 1.0"              | ±.100"            | 1.0"             | ✓      |        | Tape DL-01           |          |
| 1.1"              | ±.100"            | 1.1"             | ✓      |        | Tape DL-01           |          |
|                   |                   |                  |        |        |                      |          |
|                   |                   |                  |        |        |                      |          |
|                   |                   |                  |        |        |                      |          |

**Measured by:** Wh

**Date:** 11/04/05

**Audited by:** S b PA7 Dwg 1/1

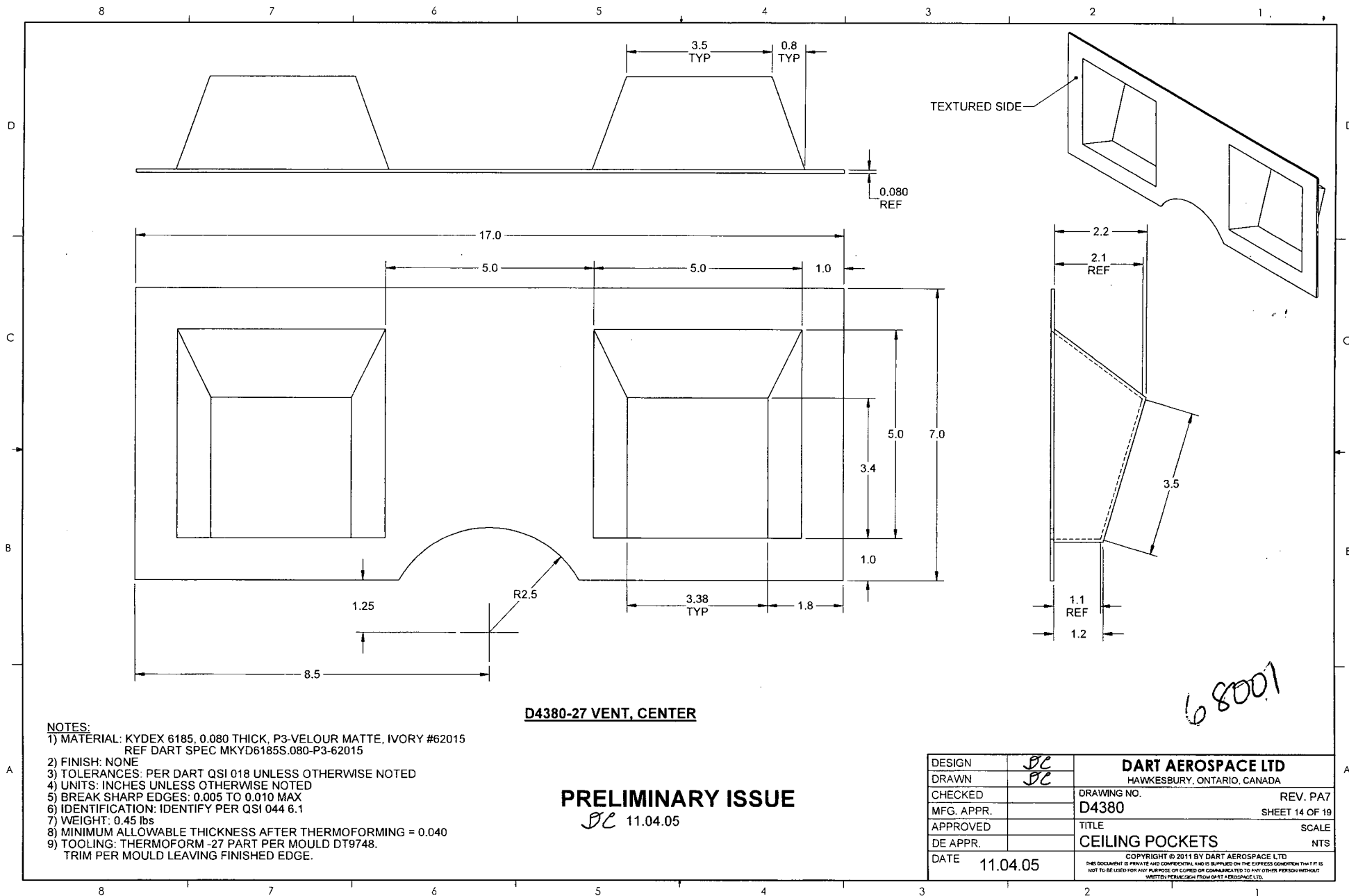
**Date:** 11/04/06

**Preliminary Approval:**

**Date:**

| Rev | Date     | Change                     | Revised by | Approved |
|-----|----------|----------------------------|------------|----------|
| B   | 10.04.14 | Added preliminary approval | KJ         |          |

10.04.14



| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE   | By | Date | Qty | Approval<br>Chief Eng /<br>Prod Mgr | Approval<br>QC Inspector |
|      |      |                    |    |      |     |                                     |                          |
|      |      |                    |    |      |     |                                     |                          |

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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| NCR: |      | WORK ORDER NON-CONFORMANCE (NCR) |                               |                                 |                |                           |                       |                          |
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| DATE | STEP | Description of NC<br>Section A   | Corrective Action : Section B |                                 |                | Verification<br>Section C | Approval<br>Chief Eng | Approval<br>QC Inspector |
|      |      |                                  | Initial<br>Chief Eng          | Action Description<br>Chief Eng | Sign &<br>Date |                           |                       |                          |
|      |      |                                  |                               |                                 |                |                           |                       |                          |
|      |      |                                  |                               |                                 |                |                           |                       |                          |
|      |      |                                  |                               |                                 |                |                           |                       |                          |

**NOTE:** Date & initial all entries

## Daryl Leger

---

**From:** Daniel Campbell <dcampbell@dartaero.com>  
**Sent:** Saturday, April 02, 2011 5:44 PM  
**To:** 'Daryl Leger'  
**Cc:** 'Eric Charbonneau'; 'JEANLUC MENARD'; 'Linda Lacelle'; Bill Beckett; 'Harvey Siemens';  
'David Shepherd'  
**Subject:** D4380 Issues

Hi Daryl,

Please see D4380-PA6 in the Prelim folder.

Fortunately, the guys were still here and I talked to them about the manufacturing issues.

Based on their feedback, I have modified the D4380-17 cover. It should be a little easier to manufacture.

However, the -3/-5/-27/-29 need to stay as they are. Please use the "cheat the corners" technique to make the part as true to the drawing as possible. There are spare air conditioning vents here – we could fedex you one on Monday if that would help in creating the moulds.

The only thing I changed in the PA6 rev was the -17.

As for cutting out the "tops" of the round parts (-21/-23/-25 etc), it is up to you. If you would like to cut it out and trim it, that's ok, or the guys here can do that.

Thanks Daryl,

Daniel Campbell  
Mechanical Engineer  
DART Aerospace Ltd.

P: 403-717-0325  
F: 403-717-1288  
E: [dcampbell@dartaero.com](mailto:dcampbell@dartaero.com)  
W: [www.dartaero.com](http://www.dartaero.com)  
M: 1060 McTavish Road, NE, Calgary, Alberta, T2E 7G6

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| W/O: |      | WORK ORDER CHANGES |    |      |     |                                     |                          |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
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|      |      |                    |    |      |     |                                     |                          |

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|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |
|      |      |                                  |                             |                                 |                |                           |                       |                          |

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